

IN THE CLAIMS:

Please amend claims 1-6 as follows:

1. (Amended) A method of manufacturing a semiconductor device in which a semiconductor element is formed in a semiconductor substrate, including selectively grinding or polishing the peripheral portion and the beveled portion on the main surface side of a target substrate including a semiconductor substrate to keep a diameter of said semiconductor substrate substantially unchanged.

2. (Amended) The method of manufacturing a semiconductor device according to claim 1, wherein selectively grinding or polishing the peripheral portion and the beveled portion on the main surface side of the target substrate is carried out after forming a deep and irregular uneven portion in the peripheral portion and the beveled portion of the target substrate.

3. (Amended) The method of manufacturing a semiconductor device according to claim 1, wherein selectively grinding or polishing the peripheral portion and the beveled portion on the main surface side of the target substrate is carried out after at least one additional step, which is included in the manufacturing steps of the semiconductor device, following forming a deep and irregular uneven portion in the target substrate.

4. (Amended) The method of manufacturing a semiconductor device according to claim 1, wherein selectively grinding or polishing the peripheral portion and the beveled portion on the main surface side of the target substrate is carried out after covering the main surface of the target substrate with a resist film, said step being carried out following forming a deep and irregular uneven portion in the target substrate.

5. (Amended) The method of manufacturing a semiconductor device according to claim 1, wherein selectively grinding or polishing the peripheral portion and the beveled portion on the main surface side of the target substrate is carried out after forming a film of a material providing a source of contamination of a processing machine for applying a predetermined processing step, which is included in processing steps of the semiconductor device, to the target substrate including the semiconductor substrate or providing a source of contamination of the semiconductor substrate.

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6. (Amended) A method of manufacturing a semiconductor device comprising:

applying anisotropic dry etching treatment to form an uneven portion in a target substrate including a semiconductor substrate; and

selectively grinding or polishing the peripheral portion and the beveled portion on the main surface side of the target substrate including the semiconductor substrate to keep a diameter of said semiconductor substrate substantially unchanged.

Please add new claims 23-33 as follows:

23. (New) The method of manufacturing a semiconductor device according to claim 5, wherein the processing machine for applying the predetermined processing step includes any one of a resist coating apparatus, a light exposure apparatus, an RIE etching chamber and a resist removing apparatus.

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24. (New) The method of manufacturing a semiconductor device according to claim 1 further comprising:

forming a first insulating film on the semiconductor substrate;

etching the first insulating film to form a trench in the first insulating film;

forming a barrier metal film on the upper surface of the first insulating film and on the inner surface of the trench; and

depositing a metal film being followed by selectively grinding or polishing the peripheral portion and the beveled portion on the main surface side of the target substrate.

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25. (New) The method of manufacturing a semiconductor device according to claim 1, wherein selectively grinding or polishing the peripheral portion and the beveled portion on the main surface side of the target substrate is carried out so as to remove a metal film formed on the peripheral portion and the beveled portion of the semiconductor substrate.

26. (New) The method of manufacturing a semiconductor device according to claim 24, wherein the metal film is a copper film deposited by a plating method.

27. (New) The method of manufacturing a semiconductor device according to claim 1, wherein selectively grinding or polishing the peripheral portion and the beveled portion on the main surface side of the target substrate is carried out after applying an anisotropic dry etching treatment to form a deep and irregular uneven portion in the peripheral portion and the beveled portion of the target substrate.

28. (New) The method of manufacturing a semiconductor device according to claim 27, wherein the anisotropic dry etching treatment is carried out so as to form a trench in the semiconductor substrate.

29. (New) The method of manufacturing a semiconductor device according to claim 28, wherein the trench is used for forming a trench capacitor formed on the semiconductor substrate.

30. (New) The method of manufacturing a semiconductor device according to claim 1 further comprising:

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forming an insulating film on the semiconductor substrate;
applying an anisotropic etching to the insulating film and the semiconductor substrate so as to form a trench in the semiconductor substrate; and
depositing a polysilicon film being followed by selectively grinding and polishing the peripheral portion and the beveled portion on the main surface side of the target substrate.

31. (New) The method of manufacturing a semiconductor device according to claim 6, wherein selectively grinding or polishing the peripheral portion and the beveled portion on the main surface side of a target substrate is carried out after depositing a metal film in a manner to cover the main surface side of the semiconductor substrate following applying an anisotropic dry etching treatment.

32. (New) The method of manufacturing a semiconductor device according to claim 6, wherein selectively grinding or polishing the peripheral portion and the beveled portion on the main surface side of the target substrate is carried out so as to remove a metal film formed on the peripheral portion and the beveled portion of the semiconductor substrate.

33. (New) The method of manufacturing a semiconductor device
according to claim 32, wherein the metal film is a copper film deposited by a plating
method.

Please cancel claims ~~7/22~~ without prejudice.